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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,209	07/14/2005	Kengo Nagata	6268-004/NP	5504
27572 7590 07/21/2009 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				
EXAMINER ADHAM MOHAMMAD SAJD				
ART UNIT 2416		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/542,209

**Applicant(s)**

NAGATA ET AL.

**Examiner**

MOHAMMAD S. ADHAMI

**Art Unit**

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 3-6, 8-18, 21-26, 29-32, 34-44, 47-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 19, 20, 27, 28, 33, 45 and 46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of claims 1,2,7,19,20,27,28,33,45, and 46 in the reply filed on 4/30/2009 is acknowledged.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1,2,7,19, and 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1,2,7,19, and 20 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of In Re Bilski 88 USPQ2d 1385. The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process. The claimed method including steps of transmitting, fragmenting, and generating is broad enough that the claim could be completely performed mentally, verbally or without a machine nor is any transformation apparent.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1,2,7,19,20,27,28,33,45, and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1,2,27, and 38, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claims 7,19,20,45, and 46 are rejected because they depend from a rejected claim.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1,19,20,27,45, and 46 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry (US 7,046,651) in view of Hu (US App. 2004/0213184).

**Re claims 1,27:**

Terry discloses *transmitting the X data packets simultaneously* (Col.8 lines 54-55 a multiple input/multiple output (MIMO) system).

Terry further discloses *a maximum data size is Dmax* (Col.2 lines 49-50 one MDSU, which is constrained to a maximum length).

Terry further discloses *fragmenting a data part extracted from a data field of one frame to be transmitted to generate X data blocks that have data fields equal to or smaller than Dmax and a packet time length, the packet time length being data size or transmission time* (Fig.4 multiple fragments – where the fragment length is less than the maximum length).

Terry further discloses *generating X data packets by adding a header field containing control information such as destination information and an FCS field containing an error checking code to transmit the X data packets simultaneously* (Fig.8 FCS).

Terry does not explicitly disclose *when the transmission rates are the same and fragments that have the same packet time length*.

Hu discloses *when the transmission rates are the same and fragments that have the same packet time length* (Para.[0016] All sub-blocks should be of equal size. The sub-blocks are then rate matched).

Terry and Hu are analogous because they both pertain to data communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Terry to include when the transmission rates are the same and fragments that have the same packet time length as taught by Hu in order to adapt the rate to channel conditions.

**Re claims 19 and 45:**

Terry further discloses *X data packets generated after the simultaneous transmission of the X data packets are transmitted continuously without performing carrier sense, until a time corresponding to a transmission time of data packets generated from the one data frame before fragmentation passes* (Col.11 lines 13-14 Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)).

**Re claims 20 and 46:**

Terry further discloses *X data packets generated after the simultaneous transmission of the X data packets are transmitted consecutively X times without performing carrier sense* (Col.11 lines 13-14 Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)).

7. Claims 2 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry in view of Kadous (US App.2005/0008092) and Woo (US 6,735,223).

**Re claims 2 and 28:**

Terry discloses *fragmenting a data part extracted from a data field of one data frame to be transmitted in accordance with transmission rates of respective*

*lines to generate X data blocks (Fig.4 multiple fragments – where the fragment length is less than the maximum length).*

*Terry further disclose the X data blocks have data fields equal to or smaller than the maximum data size of the respective lines (Fig.4 multiple fragments – where the fragment length is less than the maximum length).*

*Terry further discloses generating X data packets by adding a header field containing control information such as destination information and an FCS field containing an error checking code to transmit the X data packets simultaneously (Fig.8 FCS).*

*Terry does not explicitly disclose when it is possible to independently set transmission rates of respective transmission media for transmitting X data packets simultaneously and a same packet time length, the packet time length being transmission time.*

*Kadous discloses when it is possible to independently set transmission rates of respective transmission media for transmitting X data packets simultaneously and a same packet time length, the packet time length being transmission time (Para.[0029] The data rate, coding, and modulation for each data stream may be determined by controls provided by a controller and Para.[0114] the same data rate).*

*Terry and Kadous are analogous because they both pertain to data communication.*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Terry to include independently setting transmission rates as taught by Kadous in order to optimize the data rate based on channel conditions

Terry does not explicitly disclose *a reference transmission rate and setting a data size of X data packets to a value obtained by ( $D_{max}$  \* a transmission rate of a corresponding line/the reference rate)*.

Woo *a reference transmission rate and setting a data size of X data packets to a value obtained by ( $D_{max}$  \* a transmission rate of a corresponding line/the reference rate)* (Col.2 lines 59-62 a segmentation size of a bit stream is determined with reference to a bit rate of an input transmission stream).

Terry and Woo are analogous because they both pertain to data communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Terry to include a reference rate and setting a data size based on a bit rate as taught by Woo in order to efficiently transmit data packets.

8. Claims 7 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry in view of Hu as applied to claims 1 and 27 above, and further in view of Kadous.

**Re claims 7 and 33:**

As discussed above, Terry meets all the limitations of the parent claims.

Terry does not explicitly disclose *in a case where is it possible to independently set the transmission rate of the respective transmission media for*



*transmitting the X data packets simultaneously and the transmission rates of the transmission media are set to be a same rate as a smallest one of the transmission rates*

Kadous discloses *in a case where is it possible to independently set the transmission rate of the respective transmission media for transmitting the X data packets simultaneously* (Para.[0029] The data rate, coding, and modulation for each data stream may be determined by controls provided by a controller).

Kadous further discloses *the transmission rates of the transmission media are set to be a same rate as a smallest one of the transmission rates* (Para.[0123] the same data rate is used for all data streams).

Terry and Kadous are analogous because they both pertain to data communications.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Terry to include independently setting the transmission rate and setting the rate to be the same as taught by Kadous in order to optimize the data rate based on channel conditions.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD S. ADHAMI whose telephone number is (571)272-8615. The examiner can normally be reached on Monday-Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571)272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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7/20/09